

IN THE CLAIMS

Cancel claims 1-19 and add the following new claims:

20.(New) Apparatus for treating tumors comprising a plurality of electrodes adapted for placement in a region of tumor of a patient to be treated, means for supplying voltage pulses to the electrodes, an impedance measuring unit to determine impedance, through tissue between said electrodes and a control and converter unit to control the voltage applied to said electrodes by said means supplying the voltage pulses, based on receiving, before each voltage pulse or chain of voltage pulses, said impedance as determined by said impedance measuring unit in order to maintain a constant output voltage from the means supplying the voltage pulses even though impedance measured between the electrodes varies, thereby producing no-destructive perforation of cell membranes in the tissue and allowing treatment of the tumor.

21. (New) The apparatus as claimed in claim 20, wherein the control and converter unit includes a VDU for displaying the pulses produced by the control and converter unit; and means for manually or automatically displaying said pulses.

22. (New) The apparatus as claimed in claim 20, wherein said electrodes are respectively connected to one or both of said voltage pulse supplying means and said impedance measuring unit.

23. (New) The apparatus as claimed in claim 20, wherein said electrodes are adapted for placement in said region so that the voltage pulses pass through said region.

24. (New) The apparatus as claimed in claim 20, further comprising means for supplying at least one of a therapeutic substance, genetic material and ionizing radiation to said region for said treatment of the tumor.

25. (New) The apparatus as claimed in claim 20, further comprising sensors for detecting electric fields formed by the electrodes, said sensors being connected to said control and converter unit to enable said unit to calculate magnitude of the electric field.

26. (New) The apparatus as claimed in claim 20, wherein said electrodes are connected to be excited alternately and only two at a time.

27. (New) The apparatus as claimed in claim 26, further comprising sensors for detecting distance between the two excited electrodes, said control and converter unit including means for adjusting the voltage between said two excited electrodes based on the distance between the electrodes.

28. (New) The apparatus as claimed in claim 20, wherein said electrodes are in the form of needles or stilettos.

29. (New) The apparatus as claimed in claim 20, wherein the electrodes are surrounded by an electrically insulating layer.

30. (New) The apparatus as claimed in claim 29, wherein said electrically insulating layer completely surrounds the respective electrode.

31. (New) The apparatus as claimed in claim 29, wherein the electrically insulating layer leaves an electrically conductive tip of the electrode uninsulated.

32. (New) The apparatus as claimed in claim 31, wherein the electrode applicator includes a fixture for fixing the electrodes in a fixed pattern.

33. (New) The apparatus as claimed in claim 31, wherein said applicator is of a size and configuration adapted to the region to be treated.

34. (New) The apparatus as claimed in claim 31, comprising a fixture provided with a number of holes for placing the electrodes in a desired pattern for each particular treatment.

35. (New) The apparatus as claimed in claim 31, wherein said electrode applicator acts on a plurality of electrodes.

36. (New) The apparatus as claimed in claim 31, wherein said electrode

applicator has a channel for a respective said electrode, said channel being in communication with openings at a surface of the electrode applicator.

37. (New) The apparatus as claimed in claim 36, wherein said electrode is displaceable in said channel by remote control.

38. (New) The apparatus as claimed in claim 20, comprising an electrode applicator for at least temporary placement in the region to be treated.

39. (New) The apparatus as claimed in claim 20, comprising at least one cannula for a respective electrode for temporarily enclosing the electrode.

40.(New) The apparatus as claimed in claim 20, wherein the electrodes include radioactive material.

41. (New) The apparatus as claimed in claim 20, wherein the electrodes are coated with a layer of porous material for accommodating therapeutic substances.

IN THE ABSTRACT

Add the following Abstract of the Disclosure